



Tracker Power Supply Status

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Summary

- Status of the boards of the ASI contract
- DC-DC converter test in Taiwan



Status of Power Supply Boards

- TPD controller: HW ready awaits firmware.
- TPD filter: Almost ready, few components left.
- TPSFE: Ready
- TBS: PCB designed wait for manufacturing
- TBP: ready, probably need re-design.



Test strategy

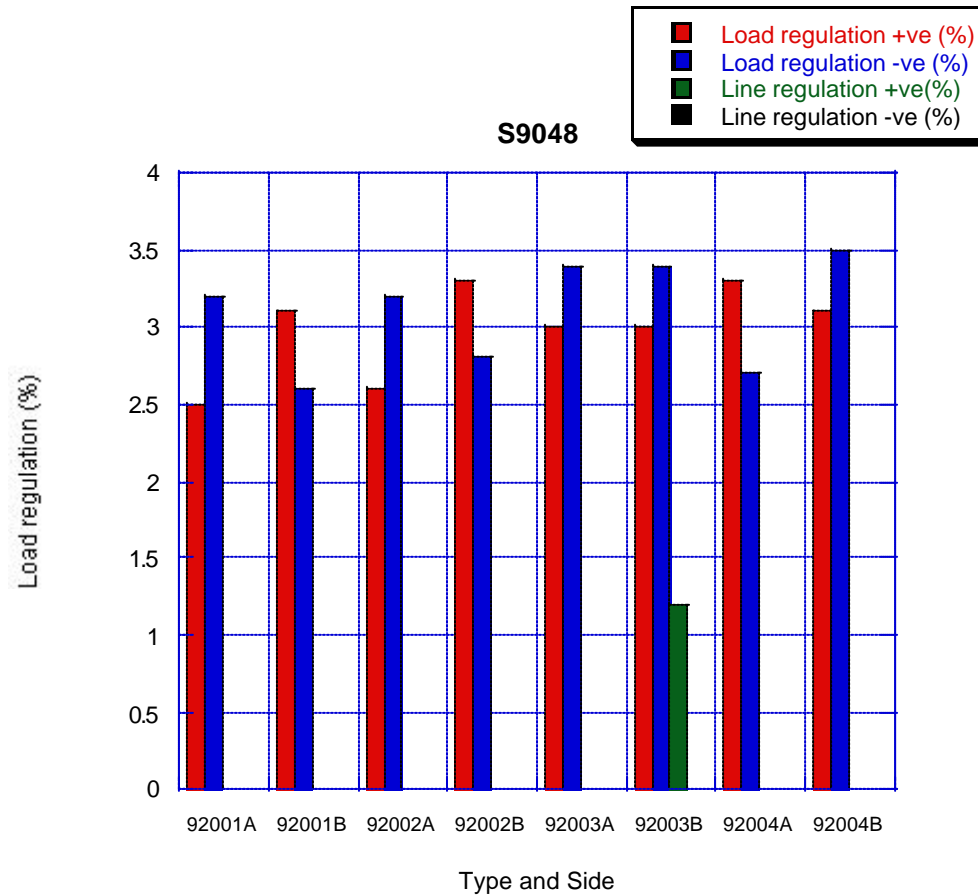
- Extensive test before thermal stress
 - Load regulation
 - Line regulation
 - Efficiency curve
 - Functionality of status and on/off bit
- Reduced test during thermal stress (measurement taken at 60 and -20 °C):
 - Voltage/current and efficiency measurement at typical load
 - Functionality of status and on/off bit



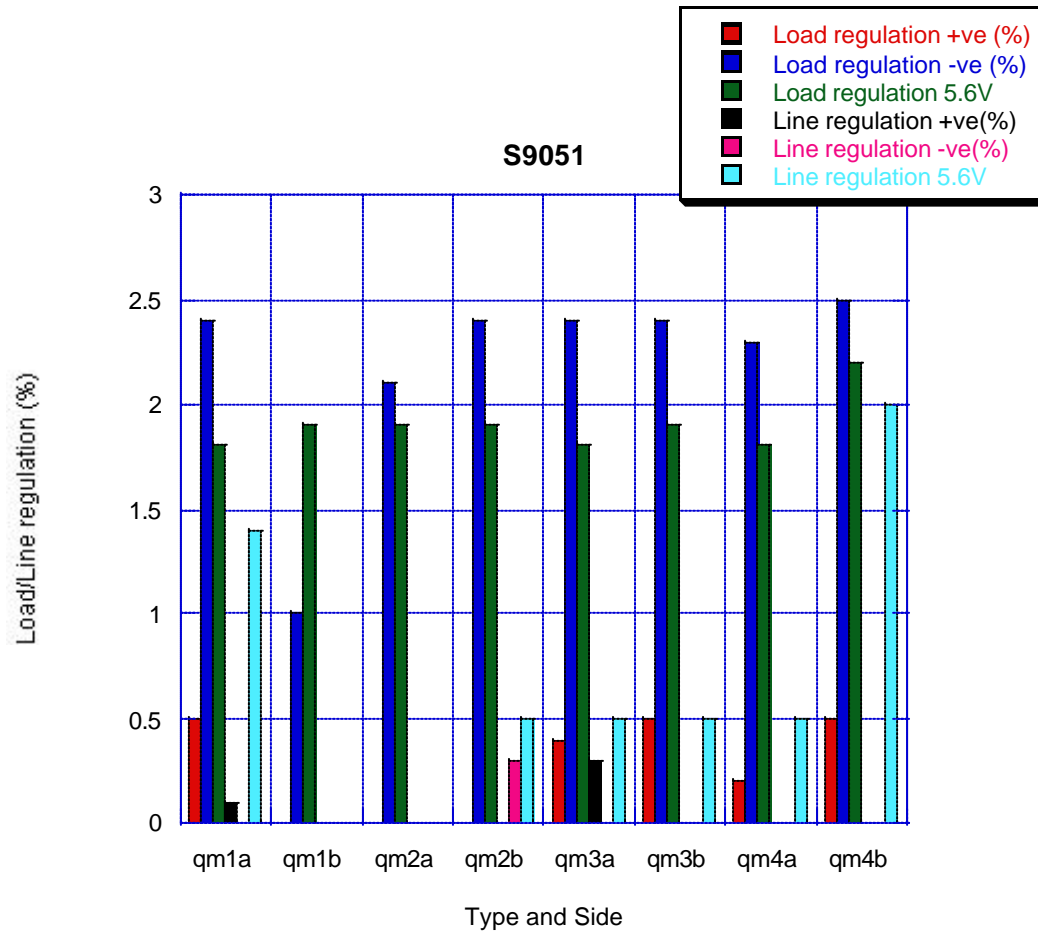
Test Samples

- We tested 4 samples of S9048, S9051 and S9053D
- S9048: 92001, 92002, 92003, 92004.
- S9051: qm1, qm2, qm3, qm4.
- S9053: 92001, 92002, 92003, 92004.

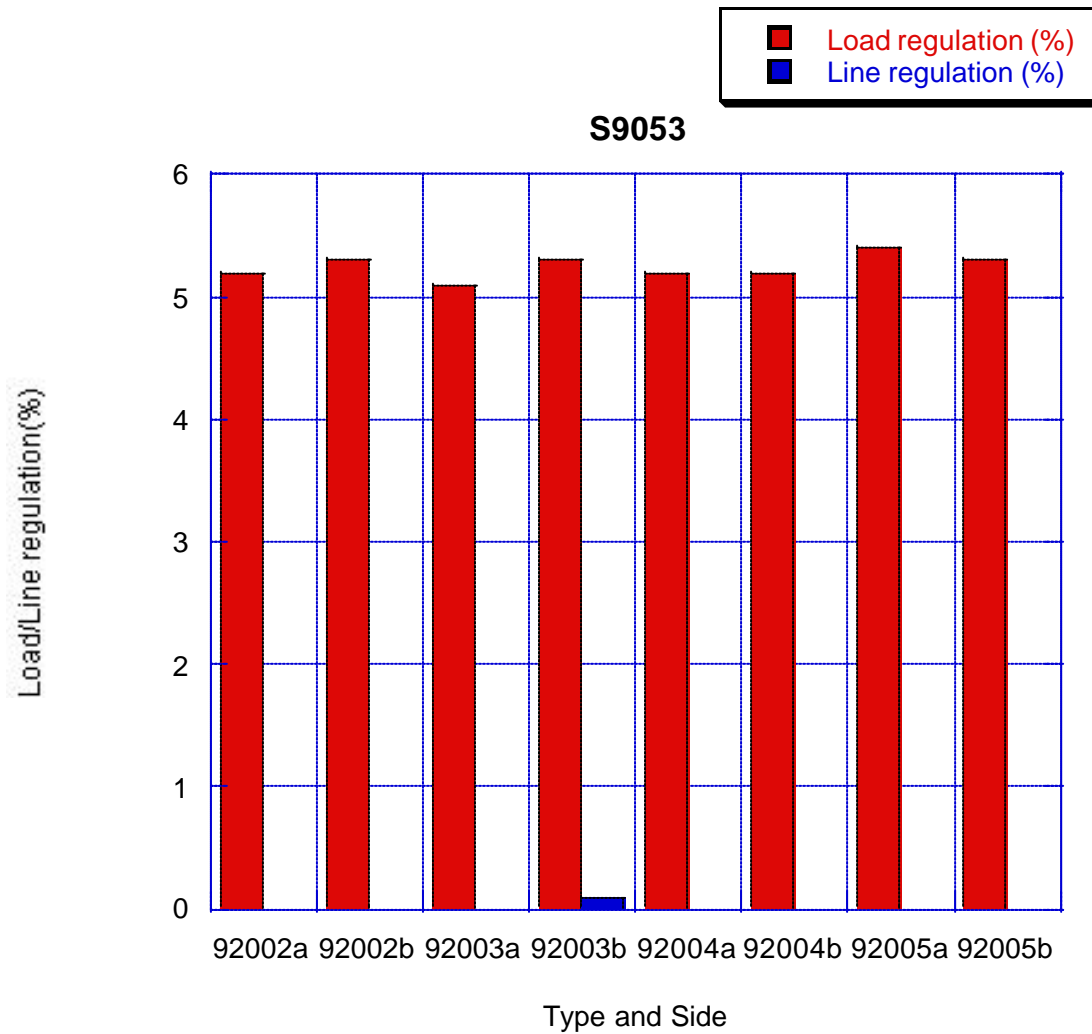
S9048 load/line regulation



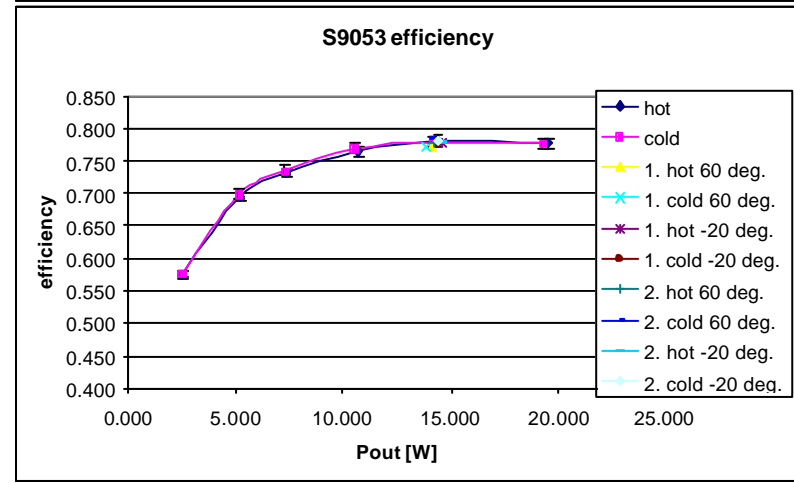
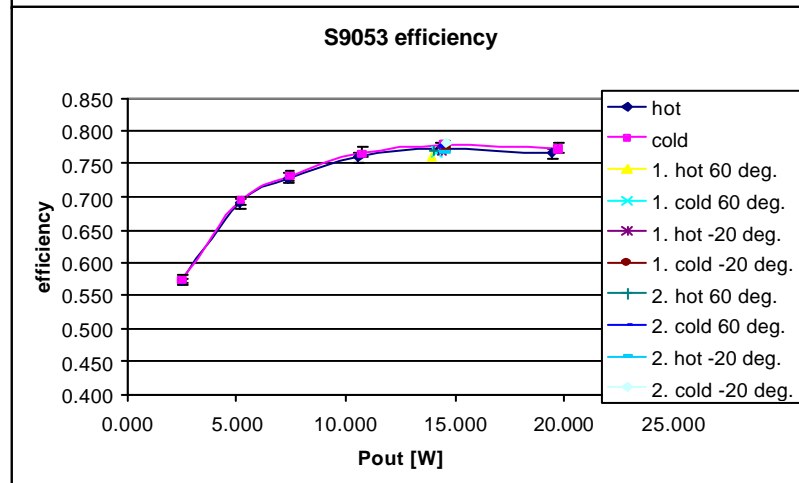
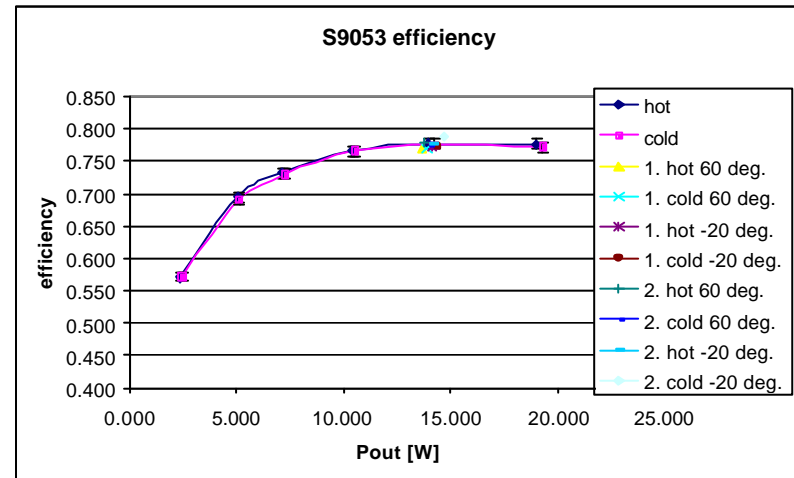
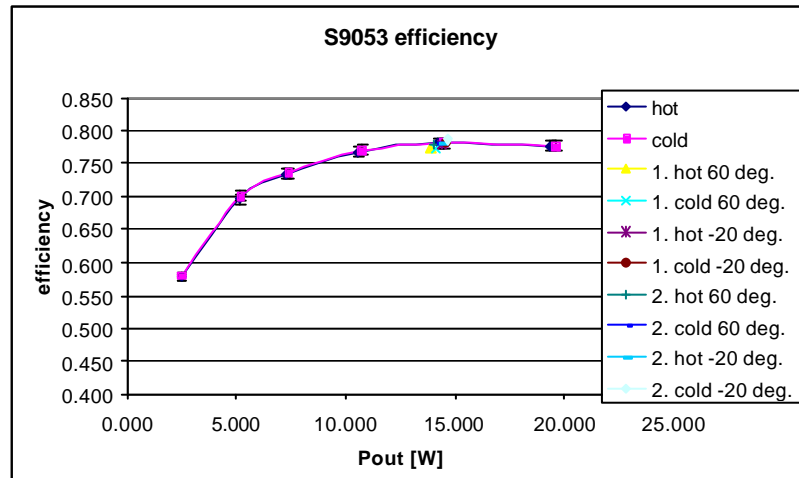
S9051 load/line regulation

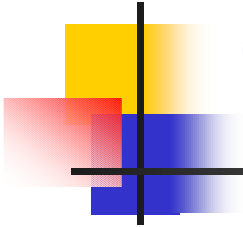


S9053 load/line regulation

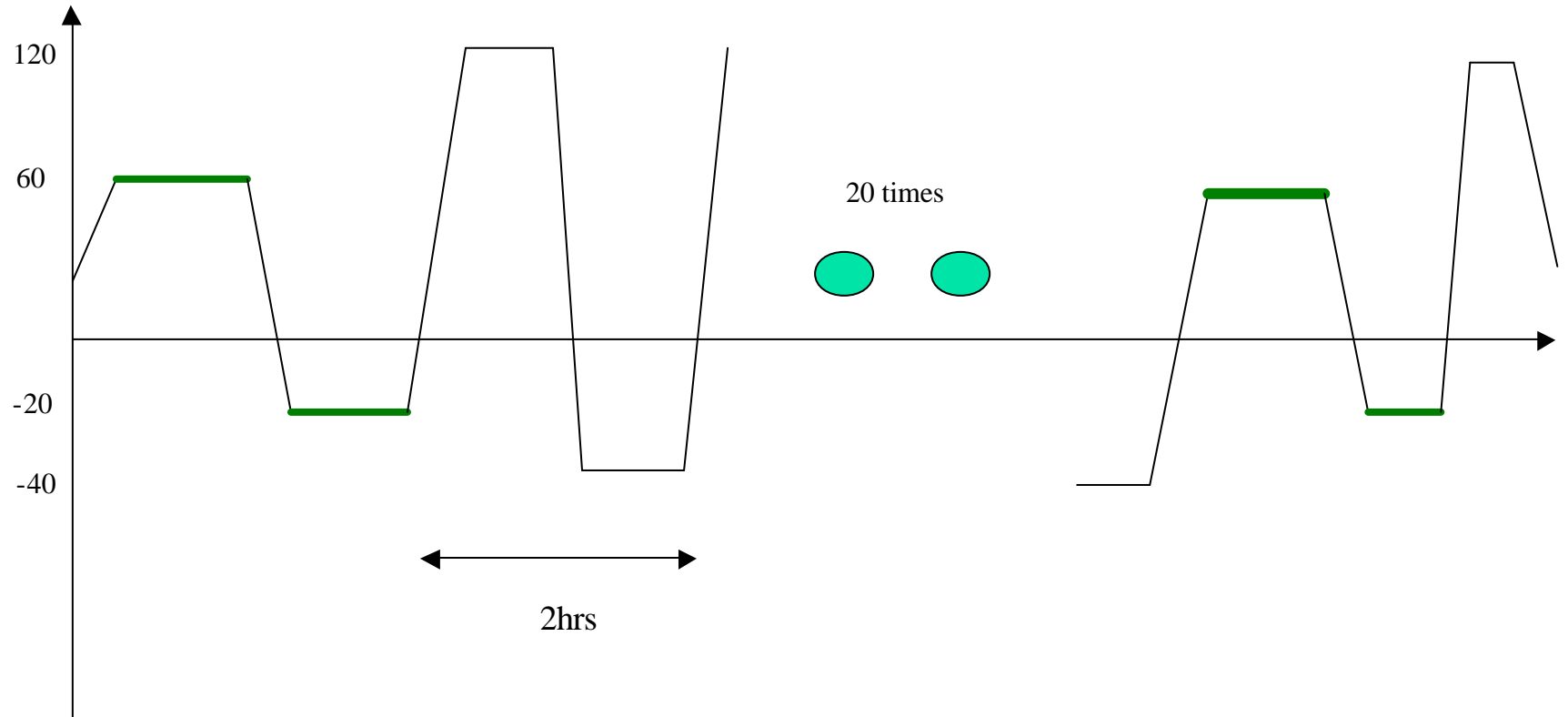


S9053 efficiency

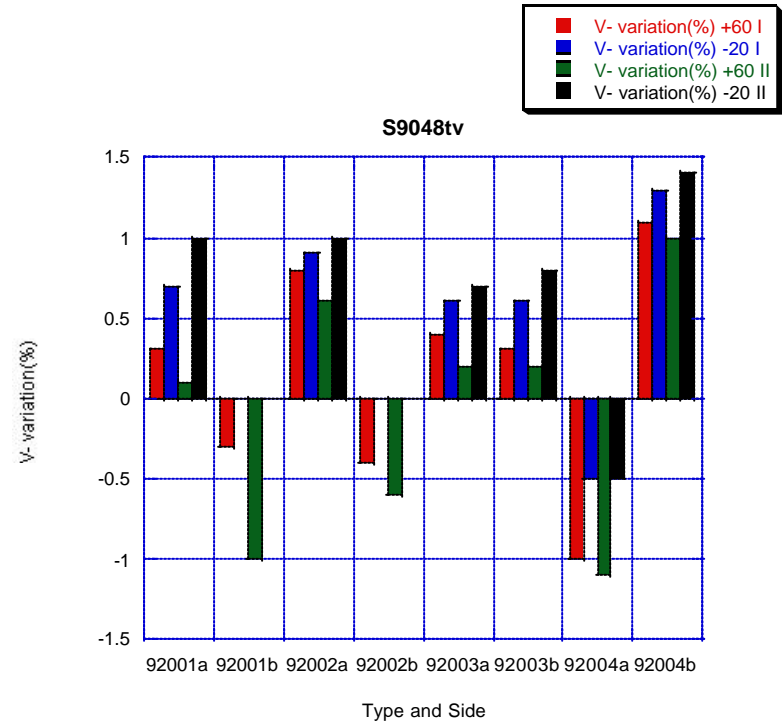
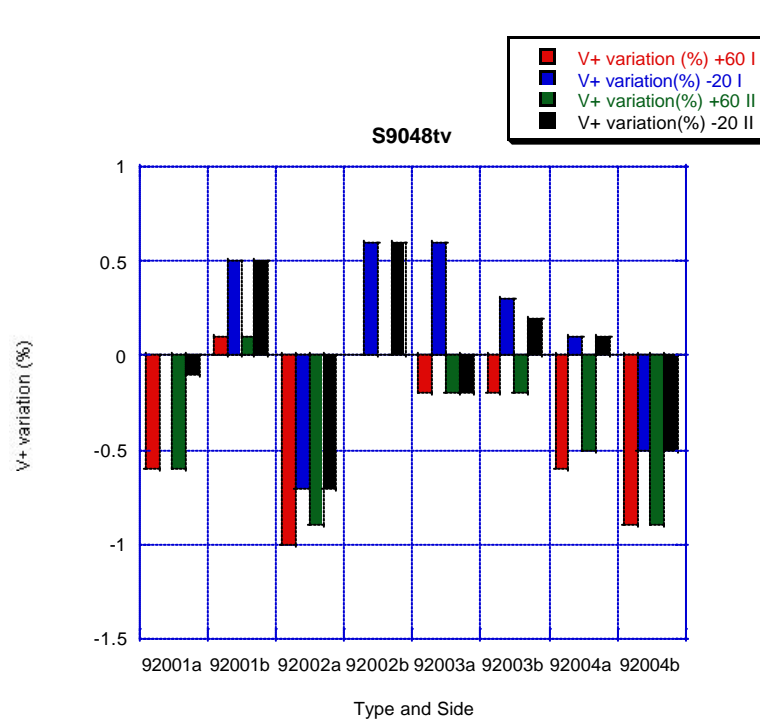




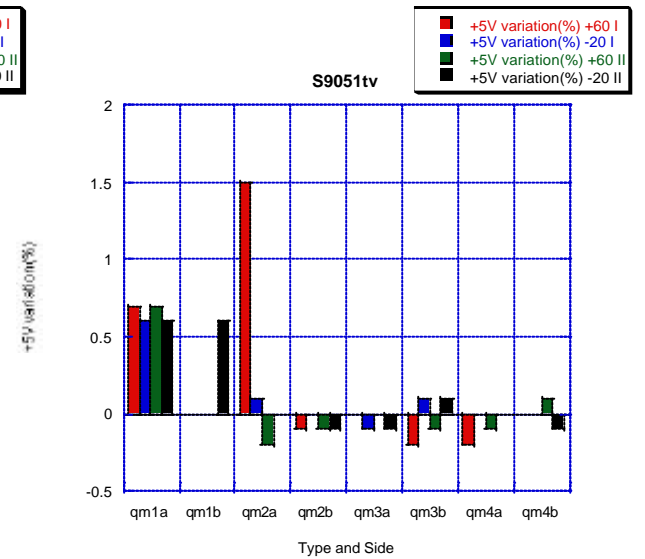
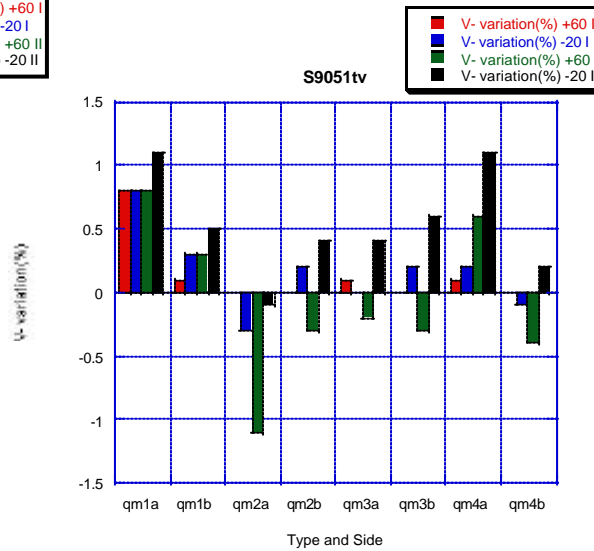
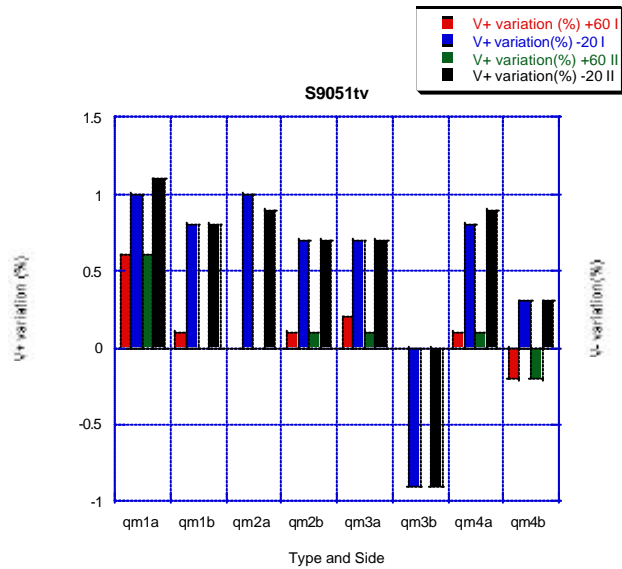
Thermal shock tests



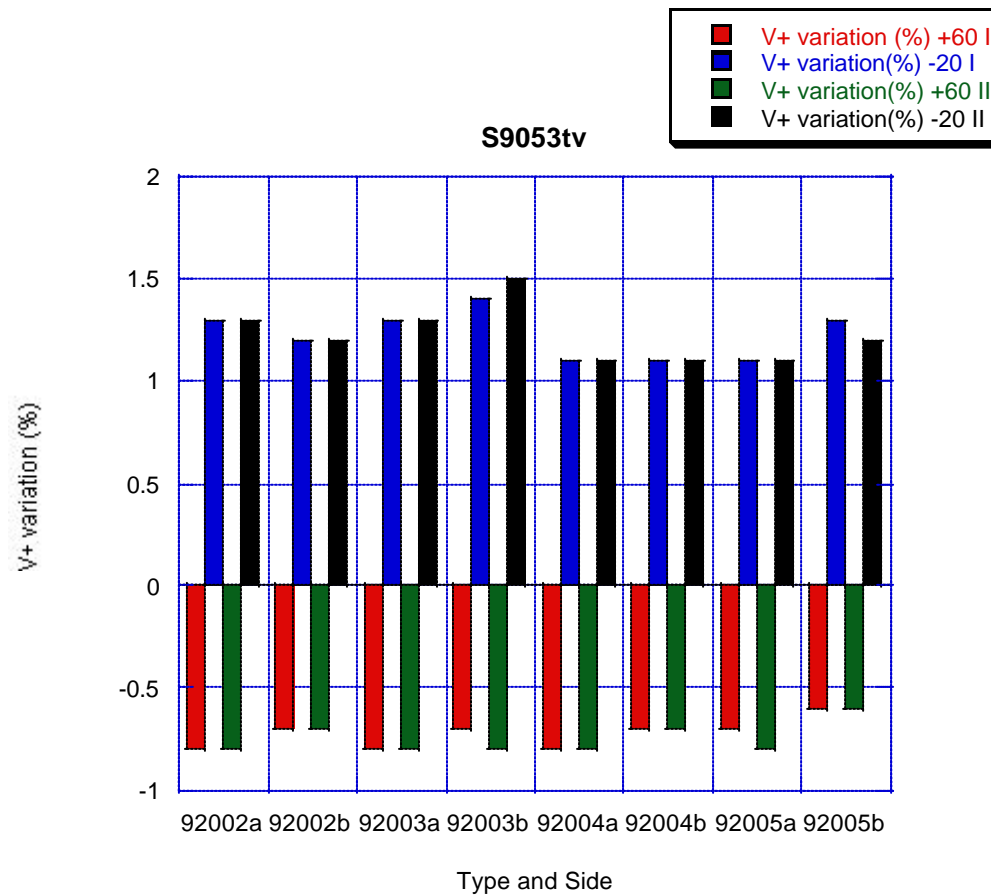
S9048 output voltage



S9051 output voltage



S9053 output voltage





Additional tests

- We tested the voltage loss on cables
- We measured noise on selected samples
 - S9048 92004: 13 mVpp@-2.5V, 15 mVpp@+2.5V
 - S9051 qm4: 20 mVpp@-2.5V, 20 mVpp@+2.5V, 30 mVpp@+5.6V
 - S9053 92004: 34 mVpp@3.4V



Conclusions

- Production of QM2 S9048, S9051 and S9053D is ok on all samples.
- We established a test protocol that can be followed also for the forthcoming tests.